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ORIGINAL COMMUNICATION.

On Diseases of the Skin—the predominance of certain forms of cutaneous diseases. By C. N. Berkeley, M. D.

In the plan* published in the first number of the Examiner for 1841, a general view of all the diseases of the skin, with their varieties and synonymes, was given, that an opportunity might be afforded of becoming familiar with the nomenclature adopted abroad, and also that the synonymes of different authors might, as far as possible, be applied to the special diseases they represent, under the names most commonly used by English writers. Though these synonymes and varieties have been presented in deference to the opinions of those who have made cutaneous diseases the study of their lives, it will be found, we think, that many of them are unnecessary for the description of such as occur in this country, owing not so much to the diseases themselves being of less frequent prevalence, as to their presenting fewer varieties. The assertion that cutaneous diseases, though frequent in occurrence, are not various in extent among us, may seem strange to those whose attention has not been especially attracted to the subject. Eruptions are seen presenting the external appearances of pustules, papules, vesicles, &c., and consequently the impression is made that the diseases are pustular, papular, vesicular, &c., according to the existence of one or the other characteristic; and a general conclusion is at once drawn as to the relative frequency of occurrence and varieties of these affections, according to the opportunities of the practitioner for observing them. But a closer investigation will show the incorrectness of such conclusions, by demonstrating the connection and dependence of these appearances upon one another, and the absolute production of many of them as consequences of others; so that by tracing carefully back the progress of disease, and watching its development, we find cases of apparently the most opposite and irreconcileable characters all deducible from the most simple common origin. Thus in thirty cases under our own observation within a short time past presenting themselves at various stages of development, twenty-five were clearly traced to an original vesicular affection: of these only five exhibited vesicles unconnected with either pustules, papules, or scales, while twenty presented all these lesions in the most marked degree, though clearly referrible to the vesicle as an origin, the microscope plainly demonstrating the progress of their development from it. Here, then, was a series of cutaneous affections affording the appearances of at least four forms of disease when in reality, in five-sixths of them but one original type can be said properly to have existed, the other sixth having been clearly deducible from a syphilitic or venereal cause. From various facts of this kind, and from continual observation, we think ourselves justified in hazarding the assertion that the cutaneous diseases of this country, though frequent in occurrence, are not of sufficient variety to be accurately included in the arrangements of foreign writers; for though the same nomenclature in part, and to a certain extent the same divisions, will apply equally well here as abroad, when we attempt to subdivide the diseases and to trace out their minute analogies through the endless ramifications of these writers, we meet with but little success, and find ourselves lost in a maze of confusion and complication.

Our object in dwelling upon this point is to show the necessity for simplifying the classifications and nomenclatures of cutaneous diseases now in use, in order to make them applicable to those of our own country. To do this, we must retain the general divisions of pustules, papules, vesicles, &c.; but we think the numerous subdivisions they embrace as laid down in the plan before alluded to, may be with advantage in many cases omitted, and the diseases assigned to one or the other of the classes, according to their original type, merely assuming as a subdivision the terms acute and chronic. The plan already published will suffice for this purpose, as it embraces all the diseases of our country, though necessarily complicated by the numerous synonymes, subdivisions, &c., belonging to those of others. We shall refer to it as a synopsis in the course of our observations.

We proceed to a consideration of the different

* Several unimportant typographical errors occur in the paper alluded to: they are principally in the synonymes, and the reader will at once detect them. A mistake of more consequence has been made in setting up the brackets in one of the classes in the second division of diseases: the synonymes of Impetigo are correctly given, while the divisions of the two varieties are confounded together; thus Impetigo figurata should have embraced Porrigo larvalis, Tinea mucosa, and Crusta lactea, within one bracket, while Impetigo sparsa should have included Teigne and Dartre crustacée flavescente in another.

classes of cutaneous disease in the order in which they are believed most frequently to occur among us.

Excluding the exanthemata, (the eruptive fevers,) we believe it would be possible to include a very large proportion of all the cutaneous diseases of this country in the two divisions of vesicles and pustules. With the exception of a few of the tubercular forms of disease, such as Lupus, Syphilitic tubercle, Cheloides, &c. and one form of papular affection, Prurigo, (in which properly we think Lichen should be included,) nearly every case we have met with was traceable either to a vesicle or pustule as its origin. For of the squamous diseases, Psoriasis as an original specific affection seems to be of infrequent occurrence, and though numerous cases closely simulating it are continually coming under treatment, close inquiry invariably demonstrates its presence as an effect of vesicular affection generally, not as a distinct disease. Pityriasis scarcely ever is the subject of medical treatment, and Icthyosis fortunately is nearly unknown in our land. So also with regard to the diseases called Bullous; their characteristic is merely an exaggerated vesicle or blister, and we question much the propriety of assigning them a distinct class any more than we should attach a separate generic term to the minute pustule of Impetigo, and to the broad scab of Variola or of Equinia. Of the class Maculæ, Purpura, the most prominent, generally constitutes merely a symptom of a constitutional disease, not often considered among those of the skin; while the copper blotches of Syphilis and the marks of Ephelis can scarce be considered any thing more than accidental accompaniments of other diseases, and not diseases in themselves. Thus we believe a large proportion of diseases of the skin may be deduced from two original forms, the *vesicular* and the *pustular*; and by attentively considering the pathology of these, as far as it is possible to associate it with the minute structure of the skin, much may be accomplished towards the establishment at least of a rational treatment of such affections in all their varieties.*

The difficulties of establishing the special pathology of cutaneous diseases, have been already alluded to as interfering with any attempt to make it the basis of a classification; still, a general idea of the pathological condition of the skin may be obtained even without an exact knowledge of the *tissue* first affected—thus in some of the exanthemes, evidences of acute inflammation are present, as pain, redness, swelling, &c. exhibiting high irritation or inflammation of the capillaries;—so also in Impetigo, Eczema, &c. the same condition in part prevails, showing the acute nature of the diseases and their dependence on increased arterial action. On the other hand there are diseases betraying a want of action or a deficient energy in the cutaneous vessels with a depression of nervous susceptibility in the circulation at large, as in some forms of Purpura, in Chronic Rupia, Ecthyma, &c. So that within the range of diseases of exaggerated and diminished action, all those of the skin might be included. For practical purposes, such an arrangement would be sufficient as a guide to treatment, provided a correct diagnosis be drawn, and a distinction made between diseases of an *idiopathic* and those of a *symptomatic* character, or in other words, between affections of the skin proper and those indicative of constitutional derangement. But it is not necessary to confine ourselves to so general a view of the pathology of these diseases; many of them betray not merely a certain condition of excessive or diminished vascular action in the skin generally, but also its exact origin and seat: thus Acne is shown to be dependent on an abnormal state of the sebacious follicles,—Porrigo on an affection of the tissue secreting the hair,—Psoriasis on excessive action of the vessels producing the Epidermis, &c. So that we have the power absolutely of establishing the pathology of many diseases of the skin, though not to the extent of making the same a safe basis of classification. We proceed to a consideration of the pathology of vesicular diseases.

The simplest lesion presented in this form of cutaneous affections, is a little elevation of the cuticle, either acuminated, rounded or flattened, and filled with clear *serum*; this vesicle does not at first appear to be dependent on inflammation of any tissue, but upon some excitant applied directly to the surface itself, or upon sympathy between the skin and some internal organ: after continuing a short time its character is changed, the serum becomes turbid, and the surface on which it rests gives evidences of irritation or of inflammation;—does this depend on the cause originally producing the vesicle, or is it the result of the action of the contents of the vesicle on the parts subjacent? Rayer considers Eczema (the most common form of vesicular affection) dependent on some

* It would be an act of injustice not to call attention to the little work on cutaneous diseases by M. C. Martins, "Les Principes de la Methode Naturelle Appliqueés a la Classification des Maladies de la peau," in which he boldly advances the opinion that diseases of the skin may be deduced from a very few original forms; and though observation induces us to differ from M. Martins as to the exact forms which originate these diseases, still we cannot but bear testimony to the general merits of the work, no less than to the beautiful analogies it presents between the "cutaneous diseases of the vegetable world world and of man;"—besides this, the diagram that accompanies it, exhibiting the relations of diseases of the skin with one another, is ost happily conceived, and may be made of much practical value to the student. We regret that this work has never been translated and published in this country.

change in the follicles of the skin, and on inflammation of the papules; and attempts to prove this by showing that it scarcely ever occurs except on parts where the follicles exist in great numbers, in which we do not think him sustained by facts.

That the follicles are implicated in the more severe forms of Eczema and of every other vesicular disease, is true; but that *they* present the most *evident lesion* in the early stages of these affections, is not so certain; and we rather incline to the opinion that the simplest form of vesicular affection is only the result of some irritant to the surface, or of a temporary congestion of the superficial vessels causing an effusion of serum beneath the cuticle, and by its retention and pressure on the parts beneath, aided by a change in the serum itself, producing a subacute inflammation of the dermis and its tissues.* When the disease is of long standing, the follicles undoubtedly are prominently affected; but then it tends to become impetiginous, losing its characteristic *vesicle*, and assuming the *pustular* form.

This is true of all the varieties of vesicular affections, and from it chiefly results the difficulty of distinguishing them in their advanced stages from the simpler cases of pustular and papular diseases. Hence, also, the confusion of synonymes in the description of eruptions of the scalp and face; the same terms being used by different writers to express diseases of the most opposite characters.

But there is another portion of the skin as intimately concerned in these affections as the follicles; and it is by no means certain that the lesions of this are not the first in succession to the original formation of the vesicle—we mean the *papillæ*, or organs of touch. Whatever the nature of this tissue may be, whether in reality the terminations of the cutaneous nerves coming from the cerebro-spinal axis—whether an exquisitely sensitive erectile vascular tissue—or whether an independent *peripheral nervous system*, in it undoubtedly are developed most acutely the *consequences* of this class of cutaneous diseases. The irritation originally caused by the effused serum may indeed *superinduce* inflammation of the follicles, but the *effects* are developed through the papillary bodies; and though the follicles may take on consecutive disease, the consequences are only truly shown in the excessive tenderness and irritability of this *peculiar nervous system*. Thus in acne, sycosis, &c., where the affection is seated in the follicles and unattended with an effusion of serum, we do not often find much pain or irritation present; and, indeed, a majority of these cases never come under the notice of the physician at all, owing to the comparatively trifling inconvenience they produce; but in even the simplest vesicular diseases the reverse prevails; a degree of irritation, if not of acute inflammation, generally attends,—and in exact ratio with the number of vesicles, and the consequent development of the affection over the papillæ, is the degree of suffering the patient undergoes; showing, we think, that vesicular eruptions generally are more dependent on irritation of the papillæ, or nervous system of the skin, *consequent on serous effusion*, than upon inflammation or any other abnormal condition of the follicles. To sum up briefly our ideas of the pathology of vesicular diseases, excluding scabies, we think that at first there is an effusion of serum from the exhalents beneath the cuticle dependent on some irritant to the surface, on sympathy with an internal organ, or on congestion of the superficial capillaries: the serum, either by pressure or from a change in its character produces irritation of the papillæ, with consequent itching, tenderness, and pain; and lastly, the follicles become implicated, at which point we believe the characteristic vesicle is lost, and a pustule becomes the type of the disease.

As the treatment of vesicular and pustular diseases varies b[illegible], its consideration will be postponed till [illegible]me to speak of the latter. Indeed, they resemble each other so closely in some of their varieties, that it is extremely difficult to draw the line of distinction, either in their kind or in their treatment. We therefore prefer postponing our remarks upon it till both classes of disease have been disposed of, that no more time and space may be occupied than necessary for presenting them fairly to the view of those interested in this branch of medicine.

* The effects of *serum* beneath the cuticle we see in blistered surfaces, whether from burns or vesicatories, where great pain and irritation are caused, unless the fluid is freely evacuated; hence, also, it is questionable whether most benefit or harm results from the presence of the cuticle on the blistered surface after the serum is drawn off: it is certainly useful in protecting the raw surface from the air, and as certainly injurious from the irritation it produces on the same.

BIBLIOGRAPHICAL NOTICE.

A System of Practical Medicine, comprised in a series of Original Dissertations. Arranged and edited by ALEXANDER TWEEDIE, M. D., F. R. S., Fellow of the Royal College of Physicians, &c. Philadelphia: Lea & Blanchard, 1841.

IT was a happy idea of Dr. Tweedie, to arrange this excellent series of publications in such a form as to make them easy of reference, and at the same time not scattered as in an ordinary cyclopœdia or dictionary. The third volume of the series is certainly superior to any that have yet appeared, with the exception of a very good memoir on inflammation, by

Dr. Thomson, and another on asphyxia, by Mr. Carpenter: the whole volume is contributed by Dr. Williams and Dr. Joy,—that is, the articles on the lungs and their diseases, by the former—those on the heart, by the latter gentleman.

The work of Dr. Williams on Physical Exploration has rendered him well known in this country, and shows that he possesses that practical knowledge of the subject which is necessary to give much value to so important a work as the present one. Hence the articles in the Library are not of course limited to physical exploration, but contain much matter relative to the general symptoms and treatment. The best articles are those on Bronchitis, Laryngitis, and Pulmonary Phthisis. That on pneumonia is good, but not quite equal to the others. The subject of gangrene of the lungs was omitted, or at least only alluded to in a very cursory way; the deficiency has, however, been supplied in the American edition,—additions have also been made to pneumonia, and notes are appended to different chapters of the work.

The memoirs on diseases of the heart by Dr. Joy are, if there be any difference, rather preferable to those of Dr. Williams,—that is, they are more novel, because the previous publications of Dr. Williams had, to a certain extent, rendered us familiar with his views. Taken together, the articles of Dr. Joy are, perhaps, the best work on diseases of the heart: they are condensed, and at the same time are more complete than most other publications, because the subject is brought down to the present time. A number of additional notes are made to these articles.

The extent of the work is too great for a complete analysis of even the leading chapters. To give an idea of the general plan pursued in the volume, and indeed one followed in most volumes of the Library, we will notice more particularly a single article, that on influenza, by Dr. Thomson, which will serve as a specimen of the volume, perhaps a little superior to most of the memoirs.

After a description of the well-known symptoms of the disease, the author proceeds to a very interesting part of the subject—its history.

These are the earlier recorded and least known epidemics of influenza. Others, severe enough to be remembered, appeared in 1775—in '80 at Canton, '81 in Bengal, Europe in '82, travelling from the east. The influenza of 1803 passed from south to north,—disease prevailed at the same time among domestic animals.

In 1832 the disease appeared at Manilla; it reached Great Britain in the spring of 1831. Was at London in June, where the author of this notice experienced a severe attack of it, and prevailed extensively in the United States in the winter of 1831–'2.

In 1830 influenza followed the cholera, beginning in the East: this epidemic prevailed at Paris in April and May, where we suffered like most others at that time in the city; this differed from the preceding epidemic by the great tendency to inflammation of the tonsils.

In 1836–'7 a fatal influenza prevailed in Great Britain; this did not proceed with much regularity from East to West, but it appeared simultaneously in England and on the Baltic.

"*History.* Hippocrates and other ancient authors give slight notices of catarrh resembling the disease under consideration. In latter times the epidemics of 1311, 1323, 1327, 1387, 1400, 1403, 1410, 1414, 1427, 1438, 1482, and 1505, were probably examples of the same affection.

That of 1323 prevailed throughout the whole of Italy, and, according to Buoni Segni, was attributed to a pestilential wind. In 1387 the disorder prevailed at Montpellier and Romagne, and is said by Valesco to have attacked nine-tenths of the population. In 1403, according to Pasquier, a catarrhal visitation occurred at Paris, so severe as to render it necessary to suspend the assizes. The epidemic of 1410, described by Valesco, was characterised by harassing cough, which was regarded as a punishment for singing a licentious song. The visitations of 1414 and 1448 were peculiarly destructive to the aged. Although the short notices now extant of the above epidemics render it extremely probable that they were examples of the disease in question, yet the first instance which we are fully authorised to refer to it, and the first accurately described by medical authors, is that which occurred in the year 1510, and proved fatal to Ann, wife of Philip of Spain. According to Schenck, it was regarded as a new disease. The epidemic proceeding in a north-westerly direction from Malta to Sicily, Spain, Italy, France, and Britain, raged over all Europe, and scarcely missed an individual, but few died except children. The complaint was attended with violent pain over the eye, and with the usual symptoms of more recent attacks. Delirium and gastrodynia

were often present, and in some instances, from the seventh to the eleventh day of the attack, snatching of the tendons and syncope occurred. Diarrhœa, or sweating, were common at the decline. It was a frequent practice to apply five blisters, two to the legs, two to the arms, and one to the back of the head. Bleeding and purging are said to have been injurious. A similar disorder prevailed in the autumn of 1557, after a hot dry summer followed by cold northerly winds. The malady was in some places preceded by ill-smelling fogs, and followed by great inundations. The disease took a westerly course from Asia by Constantinople to Europe, and afterwards visited America. The attendant fever, according to Mercatus, exhibited the character of a double tertain. This epidemic was more destructive than that of 1510: 200 persons fell victims to it at Alkmaer in Holland, and 2000 in the small town of Mantua Carpentaria. In the latter instance the mortality was attributed to the employment of bleeding; but many persons of opulence perished under the suspicion of being poisoned. A similar mortality attended the epidemic catarrh of 1580: 9000 died of the disease at Rome, according to Wierus, in consequence of bleeding. The course of the affection was from east and south to west and north. It raged in France after a cold dry wind, following long-continued warm moist weather. A prodigious number of insects covered the roads in France about the time of its appearance. In many places it was observed that animals accustomed to feed on herbs and leaves, took a dislike to their pastures. Birds of passage migrated before the usual time, and those that sleep in low valleys repaired at night to higher districts. (*Salius Diversus de Febre pestilentiali.*) The disorder raged at Sicily in June, at Rome in July; proceeded by Venice and Constantinople to Hungary and Germany, thence to Norway, Denmark, Sweden, and Russia, where it prevailed in December. Although the plague proved very destructive during this year at Cairo, it is remarkable that no European country was visited by that disorder except France, which had been the first to suffer from the catarrhal epidemic.

Bleeding from the nose frequently occurred during this epidemic, but the most characteristic symptoms were vigilance or somnolency, giddiness, resembling that of intoxication, and swelling of the parotid glands. Riverius and Forestus, contrary to the observation of Wierus, speak of bleeding as an important part of the treatment. Sixty thousand persons are reported to have died at Rome in the years 1590 and 1591 of a similar epidemic, associated with severe cerebral symptoms. Another visitation occurred suddenly in April, 1568, and was chiefly prevalent in England, after great extremes of weather: the following summer was exceedingly hot, and a fatal epidemic fever prevailed at its close. In 1663 it is said that 60,000 persons were attacked with influenza in the Venetian states in one week. The disease was attributed by Paulini to an intense fog which came from the Adriatic. In 1669, a similar affection prevailed in Holland, and proved fatal to Sylvius de la Böe. In 1675 Germany was visited in September, and England in October, by a similar epidemic: the previous summer had been unusually warm, and followed by cold moist weather. It is worthy of notice, that the plague prevailed that year in Malta, although it did not visit that place afterwards till 1813. This epidemic was preceded in France by thick fogs. The disease is said by Peu to have been peculiarly fatal to women in the puerperal state. The influenza which prevailed throughout all Europe in 1729 and 1730, was attributed by Hoffmann to changes of weather from heat to cold, and cold to heat, greater than he had ever experienced; by Lœu it was referred to thick sulphurous fogs. Several earthquakes occurred about the same time, and he considered these, as well as the sulphurous transpiration, to be occasioned by the non-occurrence of an eruption of Vesuvius. This catarrhal fever visited every part of Europe in the course of five months, and attacked 50,000 persons at Milan, 60,000 at Rome, and the same number at Vienna. It was very fatal in Paris and London; in the latter place destroying a thousand a week, in September, a greater number of deaths than had occurred in this city in so short a time since the period of the plague. Switzerland suffered little, Italy and Spain very considerably. The disorder generally proved most severe in low marshy situations. In some places it was complicated with petechiæ. Hysterical subjects, when suffering from the epidemic, complained of a peculiar feeling of cold in the course of the sagittal suture. Sanguineous discharges frequently occurred at the termination of the disease, and bleeding was in many instances employed with advantage.

The influences on which catarrhal epidemics depend, appear to have continued in operation from the year 1732 to 1737, and they were associated with remarkable electrical and telluric phenomena. During the spring and autumn of 1732, the weather was unusually dry; the aurora borealis was often peculiarly vivid: volcanic eruptions occurred in various parts of the world; south winds were attended with a dry, and those from the north with a rainy, state of the atmosphere. The disorder is said by Huxham to have ceased suddenly after the explosion of a meteor in the air, which was accompanied with a fetid fog, and produced, for an hour, an appearance as though the north of the heavens was on fire.

It was observed that the epidemic was most apt to be complicated with pectoral affections about the time of the equinoxes, and that cough was generally relieved by diarrhœa, whether occurring spontaneously or produced by purgative medicine. In the autumn of 1732 the dis-

order overran Europe and visited America. In Britain its course was southerly; it appeared at Edinburgh in November, and did not reach Cornwall till February in the following year. From New England in America it spread southward to Jamaica, Peru, and Mexico. This epidemic affected the intestinal as well as the respiratory system; sanguineous discharges from the nose, lungs, and bowels were frequent, especially when bleeding was omitted. Swelling of the parotid and salivary glands, and of the testes, was occasionally observed. In Edinburgh the poor and those most exposed to atmospheric vicissitudes suffered most. The inmates of the prison and of Heriot's hospital entirely escaped the malady, and although the interments at the Grayfriar's Burial-ground were twice the usual number in the month of January, 1733, yet the fees from the opulent classes did not exceed the common average. Before the eruption of the disease, cough prevailed extensively among horses. The years 1741 and 1742 were remarkable for atmospheric vicissitudes, frequent appearances of the aurora borealis and of meteors resembling soldiers fighting in the air. Catarrhal fever visited several countries during the years 1741 and and 1742; and in the spring of 1743, after five months of excessively severe weather with easterly winds, prevailed generally in Europe under the name of *La grippe*, a word probably derived from *chrypka*, the Polish word for hoarseness. Destructive disease existed at the same time among horses and deer. The influenza commenced with lassitude and shivering, cold hands and feet, pains of head, limbs, and spine, inflamed eyes, loss of taste and appetite. There was a remission of fever at four or five in the evening, and an exacerbation at night. The decline of the disorder was sometimes accompanied with diarrhœa, at other times with an eruption of pustules on the skin. Sauvages describes a hissing noise occurring in the cough of old people affected with the complaint, many of whom died on the ninth or eleventh day. This epidemic preceded the plague in some parts of Sicily. It was less fatal throughout England than in other countries; nevertheless a thousand died of it during one week in London. Epistaxis was a frequent symptom, and in young plethoric subjects bleeding was found useful, and, according to Sauvages, might be repeated with advantage; but Sennertus attributes the destructiveness of the disease at Rome to the injudicious employment of that measure.

The spring of 1762 was characterized by remarkable alternations of intense heat and cold, and by a rapid succession of wind, frost, snow, and rain; and epidemic catarrh was general in Europe. It had however appeared during the previous year in America. The disorder swept away one-third of the inhabitants of Toulon, extended northwards to Breslau, Vienna, and Hamburgh, and in a month passed from London to Edinburgh. This epidemic was singularly capricious in its course and severity, destroying a hundred daily at Breslau, yet sparing Paris and the greater part of France; it was exceedingly mild in many parts of England, especially London, the suberbs of which escaped, but in Norwich was more fatal than the visitation of 1743. It prevailed among the sailors in the Mediterranean in July, during the prevalence of hot weather with easterly winds. Those who were severely attacked usually had either head symptoms, or harassing cough. These symptoms sometimes alternated with each other, but scarcely ever existed together. At the end of the second week at Edinburgh, some of those affected complained of pains of the thigh, others had maniacal attacks. A large proportion of the inhabitants of Europe suffered from the complaint; but scarcely any died, except the old, the asthmatic, and the consumptive. Relapses were frequent, and those who neglected themselves had a tedious cough with some degree of fever, which occasionally was intermittent, and yielded to bark."

This was the last great epidemic of the disease, and was extremely fatal to the aged; to the young, and apparently healthy, it was also productive of much mischief, and in some cases was evidently the forerunner of pulmonary consumption.

"We may deduce from the preceding account that, since medical records have become available, influenza has prevailed on an average once in ten years, and has proved the most destructive of epidemics. There is also reason to believe, that a modified condition of the atmosphere may remain for years after the prevalence of the disease, and occasion a liability to affections of a similar character, to which the term influenzoid might be applied. For eight years after the prevalence of influenza at Lyons, this was found to be the case, 1300 deaths out of 10,096 occurring during that period, being attributed to catarrhal or mucous fevers. We are inclined to believe, that a similar condition has existed in this country since the epidemic of 1833, affections of the bronchi and fauces having been unusually prevalent, associated with severe muscular pains and unusual depression of strength. If this be the case, the subject is one of great importance, and well deserves special investigation."

The diagnosis between influenza and bronchitis of course depends mainly upon the greater development of local symptoms in the latter disease, and the epidemic character of influenza.

The author is, like all others, unsuccessful in his attempts to explain the nature of the disease; it is evidently a subject beyond our reach.

"The danger, in extreme cases of influenza, appears to arise from an excess of mucus pre-

venting the due arterialization of the blood. The difficulty and rapidity of respiration are, however, out of all proportion to the quantity of secretion, or even to the amount of inflammation, and the dyspnœa is sometimes intermittent; and this circumstance cannot easily be explained except by supposing that the cause of the disease must operate, by producing an impression on the vital energy of the lungs, analogous to that occasioned by cutting the nervus vagus; and we may reasonably conjecture that influenza depends on an influence exerted on the nervous system, especially on that part of it having most relation to the bronchial mucous membrane, tending to elicit any latent predisposition to disease, and modified in its character by varieties of constitution as well as by peculiarities of climate and other external conditions."

The sources of the disease are also obscure; it travels, like many other epidemics, especially cholera, from east to west, and is somewhat irregular in its time and mode of outbreak, like other epidemics, but further than this we know little. The explanation of the causes of the disease by referring them to meteorological peculiarities, or to the existence of some noxious matter in the air, is also of little moment.

The treatment is of course very various, for no two epidemics present precisely the same characters. Besides the adoption of the usual mild and almost hygienic remedies, the author recommends a mercurial purge; we confess we do not discover the peculiar virtue of this mineral under these circumstances. Mild diaphoretics are almost always of service; but bleeding, even when the disease is complicated with pneumonia, is generally a doubtful remedy; in fact, the disorder is often of the low or typhoid form, in which bleeding is of little service, or even positively injurious. An inflammation, therefore, complicating the disease, must be treated less actively than if met with under ordinary circumstances. The tincture of lobelia is another remedy recommended.

In our own practice we have relied in most cases nearly on diaphoretics and expectorants, especially on those remedies which have a double action. Thus the infusion of senega and eupatorium combined, and given warm in quantities just enough to produce a very slight nausea, are most effectual; we add to these, local counter-irritants, and frequent mustard foot-baths. We agree with the general opinion that bleeding, though not forbidden, should be prescribed with great caution. If the attack be at all severe, the patient should confine himself to bed.

THE MEDICAL EXAMINER.

PHILADELPHIA, FEBRUARY 13, 1841.

DISEASES OF THE SKIN—PUBLIC BATHS.

Among the poorer classes of this and other large metropoles, cutaneous affections are very much neglected. Not immediately interfering with daily labour, and requiring for their treatment conveniences and appliances not to be found in the households of the poor, they are permitted to acquire a footing and progress that tell hurtfully upon the health of the community. It is hardly worth the while of physicians, connected with the charities of the city, to seek out and attempt to relieve this class of diseases, totally unprovided as they are with the proper means of treating them. The persevering employment of various descriptions of baths is an essential adjuvant in the successful management of cutaneous disorders. These are now entirely without the reach of poor patients. We offer as a suggestion to some of the opulent charities of Philadelphia, to connect with existing institutions, arrangements that will open to these patients the benefits of such a course of treatment. Baths may be established, tickets for which can be sold at a moderate price, or given in a reasonable amount, to the class of persons who now enjoy gratuitously medical relief. We may hereafter go more at length into this subject, contenting ourselves at present with throwing out the hint.

EXPERIMENTS ON THE BODIES OF CRIMINALS.*

Louis and Orfila, by the anxiety they have shown to collect all the phenomena presented during the execution of criminals, and to study minutely the post mortem appearances, exhibit the importance they attach to such facts in a medico-legal point of view. The experiments of Orfila upon dead subjects, display only the mechanical injuries to which the suspended body is subjected; the organic alterations which would be produced in a living individual are of course wanting; we therefore deem it incumbent upon us to place upon record every circumstance which may serve to fill up this gap, and thus

* Continued from No. 5.

complete, as far as possible, the chain of evidence.

In the two latter of the cases with which we are occupied, the pulsations of the heart and of the artery at the wrist were noted shortly after the drop fell. The discrepancy is so great that we present the results in a tabular form.

	PULSE.		
Morris.		*Koebler.*	
Minutes.		Minutes.	
1½	30, firm, rising.		
2½	40, strong.		
		3	144
3½	64	3½	120
		4	120
5	64, still irregular.	5	150
5½	120, sudden rise.		
		6	150, scarcely perceptible.
		6½	155
7	too frequent to be counted.	7	155
8	72, moderately strong.	8	imperceptible.
8½	suddenly ceased.	8½	no pulse at wrist.
	HEART.		
		4	sound obscure, rhythm perfect.
		4½	less composed.
5	beats violently, 142.	5	too frequent to be counted.
		5½	scarcely audible, very frequent.
7	53	7	120
		7½	132
8	heart ceasing to beat.		
8½	ventricle beats feebly.		
10	no sound of heart or lungs.	10	60
		12	54
		12½	ceased.

The pulse was accurately noted in both instances; but it must be remembered that while the state of the heart was reported by Prof. Mitchell from immediate auscultation, the report of Dr. Duffee was derived from an examination by the hand, and must therefore be considered as less exact. We present the above table simply as a record of facts.

The post mortem examinations in the two first cases were very imperfect; that of Morris alone was complete; but unfortunately this was made at too late a period, and after the body had been subjected to numerous experiments, capable of altering the original condition of the organs. We cannot therefore deduce from it conclusions sufficiently rigorous to meet the wants of Orfila, and assist him in settling the great medico-legal questions upon which he is engaged.

Each examination however presents certain points of individual interest; and collectively they are remarkable for the absence of all those signs which are generally considered as indicative of death by suspension.

Opportunities of studying recent organs are not of frequent occurrence, and we regret that the above furnish us with so little of value. In one instance alone it was turned to profit. The eye was dissected and the tapetum found "quite distinct, as was also the spot of Sœmmering, but of a slightly greenish hue;" in the others the occasion, although so rare, was unfortunately neglected.

In the two last cases the countenance was natural and placid; in one a slight ecchymosis and abrasion existed at the posterior part of the neck opposite the knot; in the other no trace whatever of the cord could be detected. Priapism existed only in one instance, and ceased long before the body was removed from the scaffold: in both there was an emission from the urethra; this was subjected to microscopic examination in the case of Koebler, and found to consist of a few saline crystals suspended in mucus, but contained no spermatic animalculæ.

No rupture of the transverse ligament or dislocation of the vertebræ existed in either of the

three cases, in the last, upon a minute examination of the neck, no trace of the cord could be detected; no injury to the larynx or trachea could be found, except that a light rose coloured circle was visible in the mucous membrane of the latter, immediately beneath the cricoid cartilage; the carotid arteries were perfectly sound; in a word, no signs existed calculated to point out the cause of death.

The appearances presented by the viscera were equally unsatisfactory; the left side of the brain in one case was more injected than the right, but the degree of injection was not positively anormal.

The *lungs* in all these cases were *entirely free from congestion*; it must be borne in mind however, that artificial respiration had been kept up at intervals, for two hours in each instance; how far this might have modified their appearance, by inducing a species of pulmonary circulation, we are not prepared to say; we merely present the fact as a singular one.

Another circumstance, not less remarkable, was observed in the case of Morris. The blood which was found in the heart contained *a large amount of air*. The same phenomena has been noticed in a case of death which occurred in a paroxysm of hydrophobia, during which the glottis was spasmodically closed, and the muscles of respiration acted violently: and we have been informed that a similar state of the blood was observed in three individuals who were simultaneously hanged some years since. The air could only be derived from the lungs themselves, and transmitted through the pulmonary vessels; may not this be of more frequent occurrence then is imagined, when death is accompanied by violent struggles? If so it is a sign not to be neglected.

On the whole, the results of the above investigation, although not devoid of interest, are unsatisfactory. We lay them before the profession, as calculated to afford assistance to future observers, and to aid in the compilation of future statistics.

DOMESTIC.

In the last number of the *New York Journal of Medicine and Surgery*, there is a capital paper on *the purulent opthalmia of Almshouses, by N. Morrell, Assistant Physician, Long Island Farms*. The article is too long to permit us to quote it entire, but we will endeavour to present, in a condensed form, all that it contains of practical importance. The contaminated atmosphere common to Hospitals, Schools, and Asylums, and particularly to Almshouses, where numbers are crowded together, and cleanliness is not attainable, is always deleterious, and particularly to those who are not habituated to it.

"In Hospitals it produces diarrhœa, almost without exception, among the pupils of medicine when they first commence visiting the wards. In most Almshouses, diarrhœa is perpetually endemic as well among adults as children. In boarding schools the more common effect is typhus fever, where the external atmosphere combines to excite the causes within. In asylums for children, diarrhœa and ophthalmia are of frequent occurrence, and frequently endemic; but ophthalmia is not confined to asylums attached to Poorhouses; it pervades many other institutions of a similar character.

"Since mucous or purulent ophthalmia has become so common, the means of prevention deserve the first consideration, which leads to the history of the disease in the New York Almshouse, an asylum at present for more than seven hundred children. In 1831, these children were provided for at Bellevue, where at the time, all the above mentioned causes were rife; and though it is supposed that contagion was first introduced, these causes kept it in fermentation, so that more than half the children there, (about four hundred,) were unfit for school; several became totally blind, others recovered with the loss of one eye.

"Under such circumstances the most experienced physicians were consulted, and finally employed. Under their direction and advice, especially under the direction of Dr. Cheesman, the treatment was improved, scarcely one lost both eyes, and few even one; still the number in the hospital did not greatly diminish. The farms were then purchased, and here Dr. Bushe took the direction. Under a pure ventilation the disease was not so destructive; but the cases attacked were not less numerous than before, and the hospital for ophthalmia still continued its usual quota. At this time, the 8th of January, 1833, the writer went to Blackwell's Island, and took charge of the nurseries at the farms."

Dr. Morrell had previously studied this disease, and while acknowledging its contagious character, and the predisposition to its developement which existed occasionally, conceived

"That the above named causes, acting on this hereditary predisposition, would produce in the first place, disease of the conjunctiva;

that this, by rubbing, would turn to inflammation, and this terminate in a purulent discharge poisonous to the mucous membranes of a healthy child wherever applied, but especially to the mucous membrane of the eye, and thus generate an endemic disease, poisonous even at a distance, from a very simple form of inflammation in a very vitiated constitution.

"To prevent the disease therefore, the physician directed that the children be divided into squads; that the name and number of each squad be taken and marked on the beds and blankets used by each squad; that no bed or blanket used by one child should be appropriated to another without previous washing; that every child be supplied with a towel for itself, firmly sewed on every morning, to be used through the day and on the next morning, when every child was to wash either in separate water, or in water poured on his hands held over a tub, from another tub standing near, and filled with clean water; that the officer appointed to oversee the children, should be present at every ablution, and see that these directions were fully accomplished. In addition, the physician presented himself every morning, was frequently present during ablution, and in the dormitories at night, to see that his requisitions were fully answered: he also directed, and saw that his direction was performed, that the buildings which were not constructed for ventilation should be ventilated at night by the windows being left partially open, and that the dormitories should not be occupied for day rooms, or the day rooms for dormitories—thus allowing a tolerable opportunity for the purification of the air in each apartment during the absence of the children. He also directed that every thing washed should be washed in the most careful manner possible, and rendered perfectly clean. Now these appear to be regulations perfectly simple, and capable of being executed with ease. But the present writer found it very difficult, and could not procure the performance of all for more than a year after commencing; he did, however, finally procure their complete accomplishment, and had the gratification of seeing the disease gradually diminish year after year, till he has not now, the 15th of November, 1840, more than twenty out of seven hundred with ophthalmia, and these for the most part slight affections, while the others are as healthy as to their eyes, as any children in private families."

In the Deaf and Dumb Asylum the same precautions were productive of like effects. The author names the affection Almshouse Ophthalmia, because, in such institutions, the discharge, although mucous in the beginning, *commonly* becomes purulent. The signs of catarrhal ophthalmia through all its stages, up to the Egyptian or gonorrheal form, are so familiar that we omit their detail

At the period of the secretion of pus "the inflammation has already passed to new formation on the surface of the palpebral conjunctiva, but the pus is not secreted free enough to relieve the vessels underneath; the tumefaction continues and increases, while the pain becomes excruciating. At the junction of the seventh and fifth pair of nerves over the orbit, and also at the plexus underneath it, the pain is excessive; and from this pain the patient can obtain no relief without opium, unless the disease abate. In such cases, the writer divides the temporal artery, and lets the blood freely till the pain is relieved and the conjunctiva turns pale."

This is followed by wine of colchicum and emetics, as long as the patient can well bear to vomit, succeeded by a blister over the forehead and partly on the lids. If this fail, and photophobia still exists, with danger of sloughing of the cornea, he "takes his lancet, or a scalpel which is better, depresses the lower lid with the thumb of his left hand, while an assistant carefully raises the upper, at which moment the ball will turn up to avoid the light, and leave the point of reflection of the conjunctiva from the lid to the globe nearly exposed, and as near this point as possible, makes an incision completely through the conjunctiva to the ball for near half the circumference of the cornea. The blood flows freely, the chemosis subsides immediately, and danger to the eye is nearly past. He then continues the wine of colchicum in doses to suit the situation of the patient, and the wash of tepid milk and water till the ball is cleared off, and then applies the crystal of sulphate of copper to the lids until a cure is effected.

"In other cases, which are rare after the first two or three days of treatment, the swelling leaves the lids but remains in the conjunctiva of the ball, and as the writer believes, in the ball itself. Certainly the ball appears swollen, red, and protruding through the now attenuated lids, which cannot entirely close over it. It becomes terribly painful and as if ready to burst, which finally happens, notwithstanding any treatment known at present to the author; but fortunately such cases have always occurred in the writer's experience where only one eye was attacked, while the other remained unaffected throughout."

The passage from the acute to the chronic form of this disease, which latter consists in granulations of the conjunctiva, followed by a vascular keratitis is next considered, and the daily application of a crystal of sulphate of copper to the lids is enforced; but the author still recommends that the temporal artery be opened and permitted to bleed freely "*if occasion require.*"

"And when the internal surface of the lids has become tolerably smooth, he takes a cornea knife, depressing needle or even a lancet, and divides completely every vessel of the conjunctiva carrying red blood to the ulcers; leaves off all other treatment for a few days, then reapplies the sulphate of copper to the lids, and gives phosphorous internally. Under the use of these remedies the ulcers, no longer irritated by unnatural vessels or granulated lids, heal completely, and the cornea becomes nearly as transparent as ever. Indeed in all ulcerations of the cornea, it is beneficial to divide the vessels of the conjunctiva, if any pass into the ulcers; and some cases of opacity even, can be cured by such divisions."*

Dr. M. next treats of purulent opthalmia as modified by constitutional causes, but as the symptoms given by him do not differ from those of other writers on opthalmia, and are not so well arranged as the preceding portion of his paper, we omit them in order to present in full his plan of treatment.

"In addition to what has already been remarked, great care should be taken while treating opthalmia in Alms houses where there are frequently from ten to twenty confined in a room, that the matter from the eye, in the acute stage, be not communicated to another child, as this adds greatly to the production of relapses, and frequently to the severity of the acute stage. All in this stage should be confined to their beds, and great care be taken that the bedclothes of the one be not transferred to the other, because this is not a specific disease which passes a certain course and completes itself, but one liable to be repeated at every new infection, and to communicate inflammation to a healthy eye for months if the matter be introduced, precisely as the secretion from an old ulcer excoriates and inflames the surrounding skin, if it be at any time neglected. Hence the physician who hopes to banish the endemic prevalence of this disease from any institution in which he may find himself engaged, must follow it perpetually from the hospital to the school-room, and from the school-room to the dormitories, applying at every appearance of a recurring discharge his blue-stone, which he should carry perpetually in his pocket. He should turn the lids well out, and apply the crystal freely or otherwise, as the state of the eye may demand. Old hardened granulations should be well rubbed, while milder forms should be touched more gently. By steadily pursuing this course, the physician will neither need ointments, nor washes, nor cupping glasses, to cure with almost invariable certainty and great rapidity Alms-house ophthalmia, the different forms of which have now been considered.

There is however another form of ophthalmia, the purely scrofulous form, to which we may allude. This ophthalmia occurs more frequently in other asylums, and in private families, than in Alms-houses; but still such cases were sometimes admitted, and so varied are their forms that they scarcely admit of classification. The writer attended a case of this kind in consultation with Dr. Sargeant of the Deaf and Dumb Asylum; as the Dr. related, it commenced with several opaque spots on, or behind the cornea, in a girl of 15, who had not menstruated; at the same time he observed a slight pink circle around the cornea, and some, but no great dread of light. The Dr. treated the case antiphlogistically, and continued this treatment for three weeks, when he consulted the writer. At this time there appeared from fifteen to thirty circular opacities, from a line to two lines in diameter, around in front of each pupil. These spots on a closer examination were found to be behind the cornea, probably on the membrane of the aqueous humour, and not sufficient to obstruct the light entirely, but to render vision very imperfect. At the same time the iris remained free, but the pink circle around the cornea was distinct. We directed the patient immediately a nutritious diet with wine, which we continued till the sensibility to light had increased, and the eye became more painful. We then opened the temporal artery, and bled freely, gave Lugol's solution of iodine, in which we afterward put corrosive sublimate, (which is precipitated when put in this solution in the form of an iodine or hydriodate,) in such a proportion as to give one-fourth of a grain four times a day, with two grains of hydriodate of potash, and one of iodine, and continued the nutritious diet. After a time the sensibility to light again increased, together with the pink colour around the cornea, the opacities remaining still the same; we again opened the temporal artery, still the opacities were stationary, yet her general health was improved. We now put her on a course of phosphorus, with the syrup of sarsaparilla, to which while being made, a large quantity of yellow dock root had been added, and continued it for three months, occasionally applying a blister over the forehead or between the shoulders. Under this treatment we had the pleasure of seeing the opacities gradually disappear, and the patient

* We have been always under the impression that the vascularity of the cornea was attributable entirely to the mechanical irritation, caused by the granulations, except where a general diathesis, lymphatic or other, complicated the disease, and to such cases the writer does not at present refer. The removal of the granulations, which is effected completely by the application of the sulphate of copper, is followed by a subsidence and disappearance of the keratitis; unless a trichiasis (no unusual occurrence) still remains to keep up the irritation of the cornea. In reference to the propriety of dividing the vessels of the conjunctiva *in all* ulcerations of the cornea, we cannot agree with the writer.—*Eds. Med. Ex.*

recover. She menstruated while under treatment, and whether the treatment produced menstruation, and menstruation promoted the cure, the writer will not decide, but the cure was complete.

A man aged 28, a rock-blower by profession, was admitted totally blind. Some years previous he had received a blow on the forehead which denuded the bone over the left orbit, from the external angle to the nose. From this left eye he had not seen since the accident; this eye appeared amaurotic. From the right eye he had not seen in three weeks; this did not appear to be disorganized. A blister was applied over the forehead, and phosphorus administered. After a week the blister was repeated, and the phosphorus continued; in ten days he began to see occasional flashes of light, and in six weeks he was discharged, seeing as well as he had ever done with the right eye.

These are isolated cases, showing the probable benefit to be derived from phosphorus when the capillary system requires to be excited. This remedy has been said to act on the nervous system, but the writer has not observed such action, except on the sixth sense, through which it may stimulate the brain. Of its use in ulcerated cornea, recommendation has already been given. In these cases, after the vessels have been divided which carry red blood to the ulcers, perfect reliance can be placed on phosphorus for the remainder of the cure.

The writer has given phosphorus in many cases, and frequently with great benefit. It excites powerfully the generative system, and renders the lymph when poured out susceptible of quick organization. It probably affects the blood therefore, as much as the capillary system.

When it is decided to give phosphorus, the solution in oil should be made by putting four drachms of phosphorus in eight ounces of olive oil in a Florence flask well corked, and be heated gently in a basin of warm water, till the phosphorous melts beneath the oil, and then well shaken. This is to be repeated until the phosphorus be nearly all taken up, and then set by to cool, and afterward decanted and put into a bottle with a glass stopper. It may be given in doses of from five to twenty drops three times a day. It should not, however, be long kept, as by some action which the writer does not understand, the phosphorous loses its strength, and the physician is disapppointed. When thus given in full doses, if the dose be too large, the most common effect is a tendency to faint, while the pulse remains not materially affected or rather slow, or a slight pain in the stomach, with general heat of skin, while the pulse remains still not affected; and when in doses to produce the effect desired, it should be continued till it produces a general glow of redness on the skin, which by gentle friction shall become rose coloured. This effect should be expected, after taking it about thirty days, when, if improvement does not commence, it will be useless to continue the remedy farther.

To return to scrofulous ophthalmia. The most common form is characterized by a constantly increased sensibility to light, occasionally augmented in the morning, and diminished toward evening; while at the same period of this periodical exacerbation a pink circle will be seen on the sclerotica, surrounding the cornea. There will be an abundant flow of tears, frequent crops of pustules at the roots of the eyelashes, and a gummy secretion, probably from the glands of Meibomeus, sufficient to cause the lids to adhere in the morning. These periods of periodical exacerbation commonly occur in the spring and autumn. They are always worse in the spring, and endure from six weeks to two months, when they cease, leaving the eye more or less divested of eyelashes, reddened along the lachrymal groove, incapable of much application, and too moist for distinct vision. Now this form is hereditary, and depends on an original deficiency in the power of formation during gestation, and has at each period of exacerbation, as said above, the morning sickness and afternoon excitement of the mother. It cannot therefore be cured, but can be so far improved, that the difference of strength between such an eye, and one perfectly formed, can scarcely be observed; yet the case requires a long course and much perseverance, as well on the part of the patient as the physician. For not till much of the material composition of the eye has been absorbed and reproduced under treatment, can the physician expect to find his patient materially improved.

The writer begins with the syrup of sarsaparilla of the best kind, in doses of a table spoonfull three times a day for a child, and after two months, adds Lugol's solution of iodine, and continues these yet for two months. If at the end of four months the eye shows a marked improvement, and the pustules are reproduced less frequently, he makes an ointment of Peruvian balsam, two drachms to the ounce of lard, and with this anoints the lids every night on going to bed; he then adds to Lugol's solution minute doses of corrosive sublimate (which should be decomposed by the solution before being given) and continues for still two months; all the time giving a nutritious diet, and removing the excess of action, if there be any, by blisters between the shoulders, or a seton in the arm, and anticipates at the end of six months, something like a cure. But if there still be no improvement, he omits the iodine and corrosive sublimate, and gives phosphorus. From this remedy, in some cases, he expects the action will be too high at first, for which the temporal artery may require to be opened. After this he leaves off the phosphorus, and recurs to the iodine; and so alternating with phosphorus or iodine, while the syrup of sarsaparilla is in constant requisition. He continues for a year or twenty months, when he has ne-

ver yet failed to have the satisfaction of seeing such eyes, if not perfectly cured, well enough for all ordinary purposes of life, and in his experience they have rarely *relapsed*.

M. Guérin on Rachitis.—An elaborate memoir on the general characters of Rachitis has been translated for the January number of the Western Journal of Medicine and Surgery, from the French of M. Guérin, by Dr. Colescott, of Cincinnati. We extract the general summary and conclusions of this paper.

The researches contained in this memoir may be recapitulated as follows:

1. Rachitis is a general affection of infancy, characterized by the alteration or perversion, and also the suspension of the process of developement and of reparation of the organism, and particularly of the osseous system.

2. The progress of rachitis, considered as an affection of the skeleton, comprises three distinct periods: first, the period of *incubation* or of *effusion*; second, that of *deformity;* and third, that of *resolution* or *eburnation;* to each of these periods correspond some peculiar general symptoms, and some peculiar alterations of the osseous tissue.

3. The influence of rachitis upon the osseous tissue is revealed by four distinct orders of facts: first, the *deformity;* second, the *alteration of tissue;* third, the *arrest of development;* and fourth, the *delay of ossification.*

4. The rachitic deformity of the skeleton is developed successively from below upwards, from the bones of the leg to the thigh bones, from these to the pelvis; then come successively or simultaneously the different portions of the superior limbs, the thorax, and, in the last place, the vertebral column and the cranium.

The degree of the deformities is in relation with their order of development; whence it follows that the rachitic deformity of one portion of the skeleton always implies that of the portions situated below.

5. Most of the bones of the rachitic skeleton are always relatively less developed in length and breadth than those of the healthy skeleton; this shortening which is independent of that resulting from the deformities is effected according to the same laws; that is to say, successively from below upwards, and gradually from above downwards. The proportion according to which all these parts of the skeleton are reduced from below upwards is expressed by a regular series of numbers, which permits us from the dimensions of a single bone to deduce approximately that of the other portions of the skeleton.

6. The greatest reduction of the inferior compared to that of the superior members establishes between these parts relations of length, which repeat and perpetuate those of the age at which the malady is developed.

7. The shortening of the bones considered in rachitic adults is a result composed of the arrest of development of the osseous system under the direct influence of the disease, and of the consecutive slowness of its increase subsequent to the disease.

8. The texture of rachitic bones presents entirely different characters according as they are observed during the period of *incubation*, *deformity*, or that of *resolution;* they differ at the beginning and the end of each of these periods, and are different, lastly, according to the *degrees* and the *age* of the affection.

9. During the period of incubation an effusion of sanguinolent matter occurs in all the interstices of the osseous tissue, the cells of the spongy tissue, the medullary canal, between the periosteum and the bone, the concentric lamellæ of the diaphyses, the epiphyses and the diaphyses, the epiphysary nuclei and their cells, in the short and the flat, as well as in the long bones; in a word, in every part of the skeleton, and all the points of the osseous tissue to which the radicles of the nutrient vessels are distributed. From this effusion result the exfoliation of the parts composing the tissue, and the swelling and enlargement of the different portions of the skeleton.

10. During the second period, that of deformity, at the same time that the frame-work of the osseous tissue is losing its consistence and growing soft, the matter which continues to be deposited in all the interstices of this tissue tends to organization: it passes successively from the cellulo-vascular to the cellulo-spongy form. This newly formed matter is particularly abundant between the periosteum and bone, the medullary membrane and the canal, the periosteum and external table of the flat bones, and between the plates of the latter.

11. During the third period, that of resolution, the newly formed tissue in the long, and in some of the short and flat bones, passes into the condition of the compact tissue, and has a tendency to confound itself with the old tissue, which retains its primary hardness. This addition of a new to the ancient tissue gives a very great increase of thickness, and especially of width to some parts of the bones which had been the seat of the organization of the new spongy tissue of the preceding period.

12. In the state I have designated under the name of *rachitic consumption*, and which results from an exaggerated degree of the affection, the unfolding and the separation of the parts composing the osseous tissue, are so great that their reunion has not been effected, nor the organization of the effused matter taken place. In this condition the partitions and osseous lamellæ have continued separate, and the consistence of the primitive bone has been so much reduced that its external layer is formed sometimes by nothing more than a thin pellicle.

13. The texture of the rachitic bones in adults when the disease has been completely

dissipated presents a compactness and hardness superior to that of the healthy state. In this state, which I call *rachitic eburnation*, one can no longer discern any trace of the union of the elements of the old with those of the new bone.

14. The deformities of the spine, which happen towards the age of puberty, and all those which have not been preceded by deformities of the inferior limbs are not of a rachitic nature.

15. Rachitis is an affection essentially different from *scrofula*, or from the *tuberculous* affection of the bones, as well as from every species of *softening of the bones observed in adults;* for these latter affections the denomination of *osteomalacia* must be exclusively reserved.

HEALTH OF THE CITY.

INTERMENTS *in the City and Liberties of Philadelphia, from the* 30*th January, to the* 6*th of February*, 1841.

Diseases.	Adults.	Children.	Diseases.	Adults.	Children.
Apoplexy,	1	1	*Brought forward*,	40	39
Asthma,	1	0	Infl. of bladder,	0	1
Caries of Spine,	1	0	—— pleura,	1	0
Croup,	0	6	—— peritoneum,	1	0
Cong. of lungs,	2	1	Intemperance,	1	0
—— brain,	0	1	Jaundice,	1	0
Consumption of the lungs,	17	2	Measles,	0	1
Convulsions,	1	7	Old age,	1	0
Cyanosis,	0	1	Palsy,	4	0
Diarrhœa,	0	1	Small pox,	1	0
Dropsy,	1	1	Still-born,	0	6
—— head,	0	6	Ulceration of bowels,	1	0
—— breast,	1	0	Unknown,	2	1
Disease of the heart,	2	0	Total,	53	48
—— bowels,	0	1			
Dysentery,	1	0	Of the above, there were under 1 year,		23
Erysipelas,	1	0	From 1 to 2		7
Fever, scarlet,	0	3	2 to 5		12
—— continued,	1	0	5 to 10		5
—— congestive,	1	0	10 to 15		1
—— typhus,	1	0	15 to 20		1
—— typhoid,	1	0	20 to 30		12
—— puerperal,	1	0	30 to 40		15
Hooping-cough,	0	1	40 to 50		7
Inflammation of the brain,	0	1	50 to 60		7
—— bronchi,	1	1	60 to 70		5
—— lungs,	2	4	70 to 80		3
—— stomach,	2	0	80 to 90		2
—— bowels,	1	1	90 to 100		1
Carried forward,	40	39	Total,		101

In the above are included fourteen people of colour, and nine interments from the almshouse.

FOREIGN.

Remarks on Stammering, by a Sufferer.—The following observations on this annoying infirmity are from the pen of a physician, who, till his twentieth year, had been afflicted with stammering, and who then cured himself in the manner which we shall afterwards notice.

Most writers on stammering have attributed it to the irregular and convulsive movements, or to the faulty position in relation to the teeth and palate, of the tongue and lips. Thus M. Hervez de Chegoin mentions the absolute or relative smallness of the flesh of the tongue, and the shortness of the frænum as its most frequent causes; and he has reported two cases where a cure was effected by dividing this bridle.

But in a large majority of stammerers there is no irregularity whatsoever in the organs of speech: and even if there was, the admission of such a cause would not account for the infinite varieties of the infirmity and the influence which moral emotions exert upon its development.

MM. Sauvage and Itard regard debility of the muscles of the tongue as one of the most frequent causes. But do not persons that stammer execute with the greatest ease and rapidity all the various movements of the tongue and lips?

Is it not rather a state of spasm than of debility? How, too, on this hypothesis, are we to explain the spontaneous cure of stammering as life advances, when debility, local as well as general, must necessarily increase?

Other writers seek for the cause of the malady in the action of the brain on the muscles of the voice—an explanation which may be quite just, indeed, if it were not so vaguely expressed: a vagueness which seems to have actually bewildered some writers who have adopted the explanation in question. Thus, Rullier, in the Dictionnaire de Medecine, says: "In stammering, the cerebral irradiation which follows an act of thought, and becomes the moving principle to set in action the muscles necessary to the oral expression of the ideas, bursts forth with such impetuosity, and is reproduced with such rapidity, that it exceeds the mobility of the agents of articulation."

But this is surely paying too great a compliment to stammerers; for my part I must confess that I never experienced that rapid flow of ideas and impetuous action of brain, which the author talks of.

M. Magendie attributes stammering to such a deficient action of the organic intelligence as is capable of disturbing the movements of the vocal organs, which are influenced at the same time by the nervous system of organic life, and by the action of the brain.

All that we can reply to this explanation is, to ask what the author means to announce; for to us his language is quite unintelligible.

But to form a more accurate idea as to the cause of stammering, let us now briefly notice what we observe in a person afflicted with this infirmity when he attempts to speak.

In some cases—and this is the least severe form of the malady—the person speaks sufficiently fluently for a greater or less length of time; but if the pronunciation of a word which begins with certain consonants, such as *b*, *p*, or *v*, coincides with the close of an expiration, then the breathing becomes embarrassed, hurried, and panting, and the efforts of the person to pronounce the word are accompanied with convulsive movements of the lips; at other times the lips are in a state of tonic spasm. At length the person succeeds in overcoming this difficulty, by taking his breath or making an inspiration.

In other cases, where the stammering is more decided, the person often cannot utter without difficulty almost any sound, even when the word which he wishes to pronounce begins with a vowel, (as was the case with myself in respect to the word *oui*;) the features and neck swell up; the jugular veins become distended; and the person tosses his arms about to find relief.

These two degrees of the infirmity are often observed to co-exist in the same person: if he becomes embarrassed by a word which begins with a consonant which is not easily pronounced, the fear of not being able to proceed renders the respiration panting; and then any efforts at speech are quite impracticable.

In both degrees or stages of the malady, *the stammering ceases after a strong inspiration;* but it returns at once if the person does not continue to respire regularly, and the more frequently and badly if his breathing becomes agitated, and he strives much against it.

The great object, therefore, is to bring and keep the respiration in a quiet, tranquil condition, and cause it to follow a certain degree of cadence, such as we use in singing or in declamation. If the person can but once effect this, he will no longer stammer.

From what we have now said, it is evident that in all the various sorts or degrees of stammering, its essential cause consists in a convulsive condition, either of a tetanic or a choreic character, of the respiratory function—the effect of which is, either to disturb more or less, or altogether prevent, the articulation of sounds.

What occurs in the lips, tongue, and throat, is not the essential and primary cause, but is altogether accessory; and it is according to which of these parts is chiefly affected, that the different varieties of the infirmity are produced.

The immediate cessation of the irregular convulsive movements by taking in a deep inspiration, clearly shows how intimately they are connected with the cause now mentioned. It was by attending to this simple means, suggested to me by Dr. Lindt, of Berne, that I cured myself at the age of twenty years. The cure, indeed, was aided a good deal, I believe, by the employment at the same time of gymnastic exercises—the effect of which is powerfully to increase the influence of the will over the muscular system in general. Indeed it has been by their influence in regulating the act of breathing, that the efficacy of various means, which have been recommended and found useful, at various times, in the treatment of stammering, is to be accounted for. In this way the practice of declaiming on the sea-shore with a pebble in his mouth cured, it is well known, Demosthenes of old.

M. Itard has advised the use of some mechanical means to keep the tongue raised, and he makes his patients at the same time speak in a foreign language. This plan of keeping the tongue raised towards the palate has been recommended by other writers. By this simple means, Madame Leigh assures us that she effected a cure in upwards of one hundred and fifty cases.

But however useful it may be to a person who stammers to acquire a certain control over the movements of the tongue, let it be ever kept in mind, that no permanent benefit will be derived unless the patient acquires, at the same time, the power of regulating his breathing—so that whenever he begins to hesitate or falter, he at once draws in a full breath. Madame Leigh imposed upon her pupils absolute silence, except during the hour of practising: and she always observed that those who had the greatest mental energy and power over their will were the most easily and quickly cured.

M. Columbat, although his theory of stammering is far from being correct in our opinion, has recommended a most judicious method of treatment, which if rightly pursued is always sure to effect a cure. It consists in adopting the following three means: 1, giving the tongue such a position that its apex is directed upwards and backwards; 2, taking in a deep breath at the commencement of each phrase, and repeating this more or less frequently; and 3, marking the time in speaking by the movements of the thumb upon the fore-finger.

By following out these simple rules, it is almost impossible for any one to stammer; and when we consider that this method of treatment consists essentially in causing the person to inspire at the commencement of each phrase, and marking the regular return of the inspirations by the movements of the thumb upon the finger, we at once understand its physiological explanation.

M. Serres' plan consists in making the person accompany the utterance of each sound with a powerful movement of the arms; he

does not trouble himself about the situation of the tongue. Now this plan will often succeed as well as that which we have just recommended.

But neither M. Serres, nor M. Itard, his reporter, who is surprised at the singularity of this method, seem to have perceived that every muscular effort is in fact made during the act of expiration, and therefore that the pupil, to enable him to accompany the emission of any sound with a movement of his arms, must have always a provision of air in his lungs, and that thus he acquires the custom of speaking only during expiration.

There cannot be a question as to the utility of gymnastic exercises in increasing the energy of the will and the action of the brain upon the whole muscular system. It is a novel and a most practically useful idea of M. Serres, that the treatment of stammering should consist in a *gymnastique* of the respiratory and the vocal organs.—*Med. Chir. Rev., from Gazette Medicale.*

On Artificial Nipples of Ivory.—The following remarks are from a report of Messrs. Dubois, Capuron and Villeneuve—three of the most distinguished accoucheurs of Paris—on the artificial nipples recently invented by M. Charriere, an ingenious cutler of the metropolis.

"In the construction of these nipples, he uses ivory which has already been made soft and flexible by a process that has been long known: they are more solid and more durable than those hitherto employed. They are sufficiently resisting not to be flattened by the lips of the infant, and yet not too hard to fret and inconvenience them. They are easily kept clean by merely shaking them about in water, and with this simple precaution it will be found that they are not apt to communicate any unpleasant smell or taste to the milk. Besides, they can be readily attached to any sort of sucking dish or bottle, if the child is brought up by the hand and not suckled by the mother.

To preserve the flexibility of the prepared ivory, all that is necessary is to keep it from the contact of the air by placing the nipple under a glass, or by wrapping it round with a damp cloth. In fact we (the reporters) think highly of these new contrivances, and already, we are told, they are extensively used both in public establishments and in private practice."

(We have observed in some of the recent French journals, that the prepared flexible-made ivory has been manufactured into bougies for the male uretha; but whether they possess any peculiar advantages we do not know.

Excellent artificial nipples are now made with prepared caoutchouc: they are entirely destitute of any unpleasant smell or taste, and have quite a fleshy feel to the lips when sucked with.—*Rev.*)

German Treatment of Local Paralysis.—Several German writers very strongly recommend the use, internally as well as externally, of phosphorus in cases of paralysis of the optic and auditory nerves.

In a case related by M. Dezeimeris in his late elaborate memoir on diseases and injuries of the frontal sinuses, where deafness and blindness on the left side supervened upon a severe injury of the head, he resorted to this treatment with success.

He prescribed as follows:

℞. Phosphori gr. j. solve in
Olei animalis æther. ʒj.
Olei. caryophyll. ℈j.

Dose.—Three drops, to be gradually increased to 20, to be taken on a piece of sugar night and morning. And

℞. Phosphori gr. ij.
Olei animalis æther. ʒj.
Olei cajeputi ʒss. Solve.

The eyelids to be well rubbed with this embrocation three or four times daily.

A blister also was applied upon the mastoid process and kept open.

In four weeks the patient had quite recovered his hearing and sight.—*Med. Chir. Rev. from L'Experience.*

Case of Imperforate Vagina, and Menstruation (from the Bladder?)—Ellen S——, æt. forty, and married ten years, presented herself as an out-patient at St. Thomas's Hospital, under the care of Dr. Cape, on Friday, April 24, 1840. She complained of a hard and painful tumour, about the size of a melon, situated in the uterine region, which could be felt above the pubis. She had no discharge, and her general health was not impaired. On examination per vaginam being attempted, no vagina could be found. She was then requested to retire to one of the female wards, where she submitted to an ocular examination; the labia, nymphæ, clitoris, and all the external organs of generation, were quite normal, with the exception of the vagina, which was totally imperforate, not amounting even to a cul-de-sac; being perfectly flat and unyielding, with a granulated red surface. On examining per anum, the tumour could be very distinctly felt, painful on pressure, and apparently of a subcartilaginous character. She has menstruated regularly ever since she was thirteen, the period lasting four days, and of the usual quantity.

On the 15th of May, the catamenia being present, it was thought a good opportunity for ascertaining whence the discharge flowed, as, on the previous examination, the only aperture visible was the orifice of the urethra; when it was seen distinctly exuding guttatim from the meatus urinarius.

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